

Appendix E Fire Occurrence Statistics

Alaska's fire season begins as soon the ground dries in the spring. Early season fires are typically human-caused and first occur in the Kenai-Kodiak and Anchorage/MatSu areas in mid April. These fires spread rapidly in grassy, winter-killed vegetation. The human-caused fire risk diminishes in mid to late May when the new live vegetation is prominent on the landscape. Lightning occurrence begins in late May/early June, peaks just after the summer solstice, and tapers off rapidly in July. Usually by late July, low pressure systems move across the State, bringing season-ending rain to the western Alaska and, by August, into the Interior.

For the following tables, the number of fires and acreage burned attributed to BLM is calculated by adding the number and final fire size of fires where the reported point of ignition was located on BLM-managed lands. Large fires commonly burn across administrative boundaries and affect several land owners. Fire activity has been as expected by management option designation.

The two following fire occurrence tables delineate the number of fires and acres burned by human-caused and lightning-caused fires since implementation of the thirteen original interagency fire management plans was completed 1988. The first table addresses only BLM-managed land. The lands withdrawn for military use are shown separately due to the distinctly different mandated uses of those lands verses other BLM-managed lands. The next table compares occurrence on BLM-managed lands to Statewide figures.

1988-2002 Fire Occurrence on BLM-Managed Lands

Management Option	Military-Withdrawn				Other BLM-Managed Lands			
	Human		Lightning		Human		Lightning	
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres
Critical	10	3	0	0	7	201	1	250
Full	26	20,090	1	3	35	9,987	122	330,214
Limited	83	266,700	9	6,829	6	189,948	396	2,685,427
Modified	12	2,041	5	54,960	19	1,124	164	589,565
Unplanned	81	44,300	14	21,873	0	0	0	0
Total	241 fires 416,799 acres				750 fires 3,806,714 acres			
Grand Total	991 fires 4,223,513 acres							

1988-2002 Fire Occurrence BLM-Managed Lands and Statewide Figures

Management Option	BLM-Managed Lands				Statewide			
	Human		Lightning		Human		Lightning	
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres
Critical	17	204	1	250	4,138	59,647	50	1,182
Full	61	30,077	123	330,217	1,190	251,449	623	1,141,808
Limited	89	456,647	405	2,692,255	209	711,108	1,116	9,681,670
Modified	31	3,165	169	644,524	228	8,831	693	3,168,862
Unplanned	81	44,300	14	21,874	98	44,377	45	71,348
Total	279	534,393	712	3,689,120	5,863	1,075,412	2,527	14,064,870
Grand Totals	991 fires 4,223,513 acres				8,390 fires 15,140,282 acres			

The following table compares the total number of fires and acres burned BLM-managed land, and the median and average fire sizes by management option with the Statewide figures.

1988-2002 Fire Occurrence by Management Option, and Average and Median Fire Size

Management Option	BLM-Managed Lands				Statewide			
	Fires	Acres	Average	Median	Fires	Acres	Average	Median
Critical	18	454	25	0.1	4,188	60,829	15	0.1
Full	184	360,294	1,958	2.0	1,813	1,393,257	768	0.3
Limited	494	3,148,902	6,374	40.0	1,325	10,392,779	7,843	40.0
Modified	200	647,689	3,238	10.0	921	3,177,693	3,450	4.0

**1988-2002 Fire Occurrence on BLM-Managed by Management Option
Average, 50th, 80th, 90th, 95th and 98th Percentile Sizes**

Management Option	BLM-Managed Lands Fire Size (Acres)							
	Fires	Acres	Average	≤50%	≤80%	≤90%	≤95%	≤98%
Critical	18	454	25	0.1	0.5	1.0	200	200
Full	184	360,294	1,958	2.0	25	400	3,283	22,400
Limited	494	3,148,902	6,374	40.0	2,350	8,800	26,740	82,370
Modified	200	647,689	3,238	10.0	240	2,400	13,850	47,300

**1988-2002 Fire Occurrence Statewide by Management Option,
Average and 50th, 80th, 90th, 95th and 98th Percentile Sizes**

Management Option	Statewide Fire Size (Acres)							
	Fires	Acres	Average	≤50%	≤80%	≤90%	≤95%	≤98%
Critical	4,188	60,829	15	0.1	0.3	1.0	2.0	6.0
Full	1,813	1,393,257	768	0.3	5.0	35.0	370.0	5,255
Limited	1,325	10,392,779	7,843	40.0	2,970	13,214	36,400	93,317
Modified	921	3,177,693	3,450	4.0	180	1,880	8,541	43,952

The following table delineates Statewide fire occurrence 15 years prior to implementation verses the 15 years since implementation.

1967 -1981 Statewide Fire Occurrence verses 1988 – 2002 Statewide Occurrence

Years	Human		Lightning		Total	
	Fires	Acres	Fires	Acres	Fires	Acres
1967 - 1981	4,353	2,102,657	3,219	9,666,982	7,572	11,769,639
1988 - 2002	5,863	1,075,412	2,527	14,064,870	8,390	15,140,282

1988-2001 Ten Largest Fires Statewide

Year	Fire Number & Name	Latitude&Longitude	Size(Acres)	Cause
1997	B393 Inowak	6159 15705	606,945	Lightning
1988	A043 832015	6554 14807	541,231	Lightning
1990	A143 FYU NE 85	6731 14235	464,320	Lightning
1990	A185 BTTS S 40	6615 15127	400,182	Lightning
1997	B280 Simels	6334 15712	365,871	Lightning
1997	B309 Magitchlie Ck	6338 15825	308,120	Lightning
1988	A165 832064	6558 14549	289,360	Lightning
1990	A121 032018	6637 14751	267,930	Lightning
2002	A283 Geskakmina	6438 15026	257,549	Lightning
1991	B569	6644 15207	249,784	Lightning

1967-1981 Ten Largest Fires Statewide

Year	Fire Number & Name	Latitude&Longitude	Size(Acres)	Cause
1969	9482 Holanada Ck	6603 15211	803,420	Lightning
1969	9430 Butte Creek	6520 14212	525,000	Human
1974	8686 Buza	6604 15742	512,000	Lightning
1969	9486 Bear	6450 15650	422,000	Lightning
1969	9406 Fishhook	6638 14341	363,000	Human
1977	7721 Bear Creek	6240 15410	361,600	Lightning
1969	9447 Big Denver	6502 15100	314,683	Human
1977	8623 Kugruk	6545 16223	270,000	Lightning
1977	8689 Augus	6612 15916	270,000	Lightning
1969	9513 Ridge Top	6518 15225	251,520	Lightning

1940 -2002 Statewide Number of Fires and Acres Burned*

Years	Human		Lightning		Total	
	Fires	Acres	Fires	Acres	Fires	Acres
1940-1949	200	**	938	**	1,138	12,411,076
1950-1959	745	8,502,540	1,838	2,183,050	2,583	10,685,590
1960-1969	853	4,801,563	1,527	1,563,482	2,380	6,365,045
1970-1979	3,121	151,376	2,422	5,743,170	5,543	5,894,546
1980-1989	3,172	683,514	2,233	3,861,212	5,405	4,544,727
1990-1999	4,156	513,150	1,953	9,268,766	6,109	9,781,917
2000-2002	983	526,275	278	2,632,741	1261	3,159,016

*1940 1969 USDA Forest Search Research Notes, PNW-154, July 1971

1970-2003 Alaska Interagency Coordination Center records

** not available

Each year, the Alaska Wildland Fire Coordinating Group sets the conversion date when the strategy on Modified Management Option lands changes from a strategy similar to Full to that of a strategy similar to Limited. Most lands in Modified have July 10 assigned as the date to evaluate whether or not it is appropriate to change strategy. Certain lands on the Seward and Kenai peninsulas and in Copper River area have later dates assigned

Modified Conversion Dates:

1995 July 7
 1996 July 10 with the exception of the Kenai and Matsu areas
 1997 July 4 Upper Yukon Zone Only; others July 10
 1998 July 10 with exceptions at local levels
 1999 July 10 with exception of Shaw Creek and Good Pasture in Delta Area and all AFS protection except lands south of the 64th parallel in Galena Zone.
 July 16 all exceptions
 2000 July 10
 2001 July 10
 2002 July 10 with the exception of Kenai and Matsu
 July 23 Kenai and Matsu
 2003 July 10

1988- 2002 Fire Occurrence on BLM-Managed Lands In Modified

Discovery Date before July 10					Discovery Date July 10 or later				
Fires		Acres			Fires		Acres		
158		459,370			42		188,319		
Fire Size - Percentile					Fire Size - Percentile				
<50%	<80%	<90%	<95%	<98%	<50%	<80%	<90%	<95%	<98%
10	175	1,121	8,560	49,906	20	2,400	15,170	47,300	76,300

1988- 2002 Fire Occurrence Statewide In Modified

Discovery Date before July 10					Discovery Date July 10 or later				
Fires		Acres			Fires		Acres		
651		2,536,604			270		641,089		
Fire Size - Percentile					Fire Size - Percentile				
<50%	<80%	<90%	<95%	<98%	<50%	<80%	<90%	<95%	<98%
4.7	150	1,650	8,560	46,110	2	320	2,570	7,500	29,200